

REMARKS

[0003] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-36 are presently pending. Claims amended herein are 1, 17, 27, and 29. Claims 37-52 are canceled herein. No claims are withdrawn, or added herein.

Statement of Substance of Interview

[0004] The Examiner graciously talked with me—the undersigned representative for the Applicant—on 04/27/09.

[0005] During the interview, I discussed how the claims differed from the cited references, namely Nallur, Yonemitsu, and Huntington. Without conceding the propriety of the rejections and in the interest of expediting prosecution, I also proposed several possible clarifying amendments.

[0006] The Examiner was receptive to the proposals, specifically a clarification regarding the claimed "caching a reconstructed frame". However, the Examiner indicated that he would need to review the cited art more carefully and/or do another search. No agreement was reached during the interview.

[0007] Applicant herein amends the claims in the manner discussed during the interview. Accordingly, Applicant submits that the pending claims are allowable over the cited art of record for at least the reasons discussed during the interview.

Formal Request for an Interview

[0008] If the Examiner's reply to this communication is anything other than allowance of all pending claims and the only issues that remain are minor or formal matters, then I formally request an interview with the Examiner. I encourage the Examiner to call me—the undersigned representative for the Applicant—so that we can talk about this matter so as to resolve any outstanding issues quickly and efficiently over the phone.

[0009] Please contact me to schedule a date and time for a telephone interview that is most convenient for both of us. While email works great for me, I welcome your call as well. My contact information may be found on the last page of this response.

Claim Amendments

[0010] Without conceding the propriety of the rejections herein and in the interest of expediting prosecution, Applicant amends claims 1, 17, 27, and 29 herein. Applicant amends claims to clarify claimed features. Such amendments are made to expedite prosecution and more quickly identify subject matter, which the Examiner agrees is allowable. Such amendments are merely intended to clarify the claimed features, and should not be construed as further limiting the claimed invention in response to the cited references.

SUBSTANTIVE MATTERS

Claim Rejections under § 103

[0011] The Examiner rejects claims 1-52 under § 103. For the reasons set forth below, the Examiner has not made a prima facie case showing that the rejected claims are obvious.

[0012] Accordingly, Applicant respectfully requests that the § 103 rejections be withdrawn and the case be passed along to issuance.

[0013] The Examiner's rejections are based upon the following references in varying combination:

- **Nallur:** *Nallur, et al.*, US Patent Application Publication No. 2008/0037957 (published February 14, 2008);
- **Yonemitsu:** *Yonemitsu, et al.*, US Patent No. 5,140,437 (issued August 18, 1992); and
- **Huntington:** *Huntington, et al.*, US Patent Application Publication No. 2007/0011321 (published January 11, 2007).

OBVIOUSNESS REJECTIONS

Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)

[0014] Applicant disagrees with the Examiner's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that not all of the criteria set forth for making a prima facie case have been met.

Based upon Nallur and Yonemitsu

[0015] The Examiner rejects claims 1-10, 13-15, 17-20, 22-30, 32-34, 37, 39-40, 42-44 and 46-52 under 35 U.S.C. § 103(a) as being unpatentable over Nallur in view of Yonemitsu. Applicant respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

Independent Claim 1

[0016] Without conceding the propriety of the rejection, and to more speedily resolve prosecution of this matter, Applicant amends independent claim 1 herein. Applicant submits that the combination of Nallur and Yonemitsu does not teach or suggest at least the following features as recited in this claim (with emphasis and amended text appearing):

- “using a reconstructed-frame-caching device, ***caching a reconstructed frame*** according to ***a set of criteria***, the reconstructed frame comprising a decoded multimedia content frame”

[0017] The Examiner indicates (Action, pp. 2-3) the following with regard to this claim:

Regarding claims 1, 17, 27, and 37, Nallur discloses in fig. 1 a computing device and method for processing input media in a computing device (See Abstract and paragraph [0014], lines 1-8), the method comprising caching a reconstructed frame according to a set of criteria (See paragraph [0030], lines 1-6, 27-33); receiving a request to scrub to a

predictive frame of input media (See [0031], lines 1-9); and responsive to receiving the request, decoding the predictive frame (See [0056], lines 1-7).

It is noted that while Nallur provides the request to scrub in [0056] and identifies the I frame from the MPEG-2 stream in [0050], it is silent about starting with the reconstructed frame as specified in the claims.

Yonemitsu discloses processing input media as requested including the steps of starting from with reconstructed frame (See Yonemitsu figs. 2-3, and col. 6, lines 14-28). The applicant should note that the Intraframe is the first and "reconstructed frame" where the scrubbing/playback will start.

Therefore, it is considered obvious that one skilled in the art at the time of the invention that one skilled in the art at the time of the invention would recognize the advantage of placing a request for scrubbing where such request would start with the reconstructed frame. The motivation for performing such a step is to be able to identify the Intraframe of each sequence to facilitate either forward or reverse playback as well as trick play (See Yonemitsu col. 2, lines 29-36). The applicant should note that the different criteria are disclosed in Nallur [0055], lines 1-5.

[0018] As can be seen, the Examiner cites Nallur and Yonemitsu to obviate this claim. However, neither reference teaches or suggests "caching a reconstructed frame" as claimed, and neither reference further teaches or suggests doing so "according to a set of criteria" as additionally claimed.


[0019] The Examiner asserts that Nallur teaches such in "paragraph [0030, lines 1-6, 27-33) however, in this section, Nallur describes caching the entirety of a received video stream so that it can be transferred to a storage device, device 273. There is no suggestion that the received media stream contains even one reconstructed frame. During the interview of 4/27/09, the Examiner asserted that the cited section taught that the received stream was ready for rendering on a display.

[0020] However, According to Nallur [0031]-[0033] the cached stream is stored in a memory. The stored stream is later described as being retrieved and then "processed for playback". This strongly suggests, counter to the Examiner's assertion, that the

retrieved stream is not a decoded stream ready for rendering on a display, as it needs to be *processed* for playback.

[0021] Furthermore, the cached stream is not taught as being cached “according to a set of criteria” as claimed. For this, the Examiner cites to Nallur [0055], lines 1-5, however during the interview, the Examiner clarified that the rejection in fact relied upon the single criterion disclosed in [0030]; namely “to enable media content transfers to a storage device” and further asserted that the claimed “set” could encompass “the empty set” (i.e. no criteria).

[0022] Applicant reiterates that the claim specifically recites caching is done “according to a **set** of criteria” (emphasis added). The American heritage dictionary defines “set” as used in this case according to the following:

“set² (sĕt) 
n.

1. A group of things of the same kind that belong together and are so used: *a chess set*.
2. A group of persons sharing a common interest: *the high-school set*.
3. A group of books or periodicals published as a unit.
4.
 - a. A number of couples required for participation in a square dance.
 - b. The movements constituting a square dance.
5.
 - a. The scenery constructed for a theatrical performance.
 - b. The entire enclosure in which a movie is filmed; the sound stage.
6. *Music*.
 - a. A session of music, typically dance music, played before an intermission.
 - b. The music so played.
7. The collective receiving apparatus assembled to operate a radio or television.
8. *Mathematics*. A collection of distinct elements having specific common properties: *a set of positive integers*.
9. *Sports*.
 - a. A group of games constituting one division or unit of a match, as in tennis.
 - b. An offensive formation in football or basketball.”¹

¹ “set.” The American Heritage® Dictionary of the English Language, Fourth Edition. Houghton Mifflin Company, 2004.

Answers.com 27 Apr. 2009. <http://www.answers.com/topic/set-12>

[0023] In view of the forgoing definition, Applicant submits that reasonable interpretation of the claim would therefore preclude a reference to the esoteric mathematical usage of the term "set" to include the "empty set" particularly because, in context, the usage makes no sense. As Nallur discloses no additional reason for caching the received video stream, Nallur therefore fails to teach or suggest the claimed "according to a set of criteria" as well.

[0024] Additionally, Applicant notes that the Examiner does not cite Yonemitsu as curing these deficiencies, and submits that Yonemitsu does not cure these deficiencies of Nallur.

[0025] Therefore, the combination of Nallur and Yonemitsu does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 2-16

[0026] These claims ultimately depend upon independent claim 1. As discussed above, claim 1 is allowable. It is axiomatic that any dependent claim, which depends from an allowable base claim, is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 17

[0027] Without conceding the propriety of the rejection, and to more speedily resolve prosecution of this matter, Applicant amends independent claim 17 herein. Applicant submits that the combination of Nallur and Yonemitsu does not teach or suggest at least the following features as recited in this claim (with emphasis added):

- "**caching a reconstructed frame according to a plurality of criteria**"
- "**receiving a request to scrub** to a predictive frame of input media"
- "decoding the predictive frame **starting with the reconstructed frame**"

[0028] The Examiner indicates (Action, pp. 2-3) the following with regard to this claim:

Regarding claims 1, 17, 27, and 37, Nallur discloses in fig. 1 a computing device and method for processing input media in a computing device (See Abstract and paragraph [0014], lines 1-8), the method comprising caching a reconstructed frame according to a set of criteria (See paragraph [0030], lines 1-6, 27-33); receiving a request to scrub to a predictive frame of input media (See [0031], lines 1-9); and responsive to receiving the request, decoding the predictive frame (See [0056], lines 1-7).

It is noted that while Nallur provides the request to scrub in [0056] and identifies the I frame from the MPEG-2 stream in [0050], it is silent about starting with the reconstructed frame as specified in the claims.

Yonemitsu discloses processing input media as requested including the steps of starting from with reconstructed frame (See Yonemitsu figs. 2-3, and col. 6, lines 14-28). The applicant should note that the Intraframe is the first and "reconstructed frame" where the scrubbing/playback will start.

Therefore, it is considered obvious that one skilled in the art at the time of the invention that one skilled in the art at the time of the invention would recognize the advantage of placing a request for scrubbing where such request would start with the reconstructed frame. The motivation for performing such a step is to be able to identify the Intraframe of each sequence to facilitate either forward or reverse playback as well as trick play (See Yonemitsu col. 2, lines 29-36). The applicant should note that the different criteria are disclosed in Nallur [0055], lines 1-5.

[0029] In traversal, Applicant reiterates all of the remarks presented with regard to the rejection of claim 1. Furthermore, as clarified by the amendment made herein, the caching of the reconstructed frame is done according to a plurality of criteria.

[0030] Additionally, Applicant submits that cited references Nallur and Yonemitsu do not present combinable teachings for the following reasons.

[0031] Firstly, while Nallur is loosely related to the claimed subject matter, Yonemitsu is not.

[0032] Yonemitsu is a US patent that is directed toward recording image data on a rotatable record medium such as a CD-ROM. The systems and methods presented therein are therefore largely impertinent to playback of media, and more precisely, "scrubbing", such as the claimed "receiving a request to scrub" and there is no teaching regarding caching, particularly of the claimed reconstructed frame.

[0033] Secondly, if anything, Yonemitsu provides a sound basis as to the long-felt need for the claimed invention. Yonemitsu describes a CD-ROM recording technique in which original video image data is compressed using I-frames (Col. 5, ll. 11-18).

[0034] The instant application recognizes that media is often recorded in this manner and therefore provides a solution for playback (and particularly scrubbing) to address a problem created by such a storage means. This can be seen from the following:

"...to scrub to a select frame in a GOP, wherein the selected frame is not an I-frame, a scrub tool may have to perform many processing intensive and time consuming decoding operations to reach and decode a selected frame. This substantial limitation does not even take into consideration that after such a selected frame is decoded, the content of the frame may need to be transformed via one or more effects, which will increase the delay even more." (Application, [0005])

[0035] And so, while Yonemitsu establishes the basis of the problem, which the claims address, it does not teach or suggest solutions to the problem. It is for this reason Applicant submits that it is impertinent to the claimed subject matter.

[0036] Without Yonemitsu, the Examiner fails to establish a prima facie case, particularly for the claimed "decoding the predictive frame starting with the reconstructed frame" for which Yonemitsu was cited.

[0037] As shown above, the combination of Nallur and Yonemitsu does not teach or suggest all of the elements and features of this claim. Also, there is no reason to combine the teachings of the references. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 18-26

[0038] These claims ultimately depend upon independent claim 17. As discussed above, claim 17 is allowable. It is axiomatic that any dependent claim, which depends from an allowable base claim, is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 27

[0039] Without conceding the propriety of the rejection, and to more speedily resolve prosecution of this matter, Applicant amends independent claim 17 herein. Applicant submits that the combination of Nallur and Yonemitsu does not teach or suggest at least the following features as recited in this claim (with emphasis and amended text noted):

- "during playback of a media stream, caching a reconstructed frame according to a [[set]] plurality of criteria, wherein the reconstructed frame comprises a decoded multimedia content frame, and wherein the criteria for caching the reconstructed frame is selected from the group consisting of:"
- "a detected display device resolution,"
- "repeated requests for similar frames of input media,"
- "an indication that a playback application has reverse playback capability, and"
- receiving a request to scrub to a predictive frame of input media, the predictive frame following an intracoded frame within a group of pictures

[0040] The Examiner indicates (Action, pp. 2-3) the following with regard to this claim:

Regarding claims 1, 17, 27, and 37, Nallur discloses in fig. 1 a computing device and method for processing input media in a computing device (See Abstract and paragraph [0014], lines 1-8), the method comprising caching a reconstructed frame according to a set of criteria (See paragraph [0030], lines 1-6, 27-33); receiving a request to scrub to a predictive frame of input media (See [0031], lines 1-9); and responsive to receiving the request, decoding the predictive frame (See [0056], lines 1-7).

It is noted that while Nallur provides the request to scrub in [0056] and identifies the I frame from the MPEG-2 stream in [0050], it is silent about starting with the reconstructed frame as specified in the claims.

Yonemitsu discloses processing input media as requested including the steps of starting from with reconstructed frame (See Yonemitsu figs. 2-3, and col. 6, lines 14-28). The applicant should note that the Intraframe is the first and "reconstructed frame" where the scrubbing/playback will start.

Therefore, it is considered obvious that one skilled in the art at the time of the invention that one skilled in the art at the time of the invention would recognize the advantage of placing a request for scrubbing where such request would start with the reconstructed frame. The motivation for performing such a step is to be able to identify the Intraframe of each sequence to facilitate either forward or reverse playback as well as trick play (See Yonemitsu col. 2, lines 29-36). The applicant should note that the different criteria are disclosed in Nallur [0055], lines 1-5.

[0041] In view of the amendments made herein, Applicant submits the rejection of claim 27 is moot.

[0042] Furthermore, Applicant notes particularly, that Neither Nallur nor Yonemitsu teaches that a reconstructed frame is cached "during playback" as amended herein.

[0043] As neither of the cited references discloses at least this claimed feature, the combination of Nallur and Yonemitsu does not teach or suggest all of the elements and features of this claim. Also, as shown previously, there is no reason to combine the teachings of the references. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 28-36

[0044] These claims ultimately depend upon independent claim 27. As discussed above, claim 27 is allowable. It is axiomatic that any dependent claim, which depends from an allowable base claim, is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Based upon Nallur, Yonemitsu, and Huntington

[0045] The Examiner rejects dependent claims 11-[12], 16, 21, 31, 35-36, 38, 41, and 45 under 35 U.S.C. § 103(a) as being unpatentable over Nallur in view of Yonemitsu and further in view of Huntington. Applicant respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

[0046] Applicant notes that only dependent claims are rejected using this combination of references. As such, each of the pending claims within the above listing is allowable at least by virtue of its dependency from an allowable base claim as established herein. Applicant respectfully requests the Examiner withdraw the rejection of each of these dependent claims where its base claim is allowable.

Dependent Claims

[0047] In addition to its own merits, each dependent claim is allowable for the same reasons that its base claim is allowable. Applicant requests that the Examiner withdraw the rejection of each dependent claim where its base claim is allowable.

Conclusion

[0048] All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call or email me at your convenience.

Respectfully Submitted,

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/Randall T. Palmer 61440/

Dated: 04/27/09

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